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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/779,495	02/09/2001	Yuichi Kawanishi	1344.1055 (JDH)	5533

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EXAMINER

MORAN, MARJORIE A

ART UNIT	PAPER NUMBER
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1631

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DATE MAILED: 06/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/779,495

Applicant(s)

KAWANISHI ET AL.

Examiner

Marjorie A. Moran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. All rejections and objections not reiterated below are hereby withdrawn. Claims 2-9 are pending.

### ***Specification***

The proposed amendment to the abstract was not entered as it was not filed on a separate sheet of paper. The abstract of the disclosure is again objected to because the first sentence is grammatically incorrect and generally confusing. As the abstract has not been amended, this objection is maintained. Appropriate correction is required. It is noted that the proposed amendment filed 4/10/03 would overcome this rejection if filed on a separate sheet of paper.

With regard to the term "clarified," it is noted that applicant asserts on page 5 of the response filed 4/10/03 that the Japanese term corresponding to the word "clarified" could also be translated as "sequenced" or "identified." It is noted that the terms "clarified", "sequenced", and "identified" are not generally regarded as synonymous in English, nor as synonymous scientific terms. However, in view of applicant's assertion regarding the different meanings for "clarified" possible in translation from Japanese, the amendment to page 1 is not objected to as new matter.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 2-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Amended claim 2 recites an apparatus comprising a motif range designating means "for an operator interactively designating ... and extracting a genetic motif...." The limitations of "interactively designating" and "extracting" appear to be method steps. As it is unclear whether applicant intends to recite a method step, or intends a limitations of the "designating means", claim 2 is indefinite. Further, if applicant intends a limitation of the "designating means", it is unclear what limitation of structure or function of *the means* itself is intended by the recitation that an operator perform steps (i.e. an intended use is not usually considered a limitation of an apparatus). For this reason, claim 2 is further indefinite.

Claim 2 recites a "motif range designating means", then recites designating a motif extraction range, and also recites "extracting a genetic motif." It is unclear whether the means recited is actually intended to be both a "designating means" and an "extracting means", or is intended to be merely an "extracting means", therefore the claim is indefinite. Applicant is advised that the specification does not describe a designating means which is also an extracting means.. However, as it is unclear what limitation applicant does intend, the claim is not rejected for lack of written description and/or enablement, but is rejected herein only for indefiniteness. It is noted that original claims 1 and 2 both recited a "motif extracting means" and original claim 2 recited a separate "motif range designating means."

***Claim Rejections - 35 USC § 103***

Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over KAWANISHI et al. (US 5,598,350) and ATTWOOD et al. (J. Chem. Inf. Comput. Sci. (1997) vol. 37, pp. 417-424), and in view of MARR et al. (US 5,701,256).

Applicant's arguments with respect to claims 8-9 have been considered but are moot in view of the new ground(s) of rejection.

Amended claims 8 and 9 recite a method and recording medium comprising a program for extracting and processing genetic motifs comprising means or steps for inputting gene arrangement information, interactively designating a motif extraction range on a display screen, extracting a genetic motif within the designated range from the input data, retrieving genetic information comprising the extracted motif from a genetic database (not limited to be the same as the input data), and adding the retrieved information to the input gene arrangement information.

ATTWOOD teaches a method and program for extracting and processing genetic motifs, as previously set forth above. ATTWOOD does not teach interactively designating a motif range.

KAWANISHI teaches a method and means for extracting and processing genetic motifs wherein his apparatus comprises an input means for genetic information, a motif extraction means which extracts a motif based on a designated extraction range, and an output means (col. 4, lines 4-35). KAWANISHI does not teach that designated extraction range is entered interactively.

MARR teaches a system and method for comparing sequences wherein alignment length and block size of sequences to be compared (i.e. an "extraction" range), among other commands, are entered interactively on a computer (column 11, lines 31-40)

It would have been obvious to one of ordinary skill in the art at the time of invention to have included the extraction range designation of KAWANISHI in the method and program of ATTWOOD where the motivation would have been to extract and identify motifs at high speed and easily, as taught by KAWANISHI (col. 12, lines 60-66). One skilled in the art would reasonably have expected success in including the motif extraction range designation of KAWANISHI in the method and program of ATTWOOD because both ATTWOOD and KAWANISHI teach similar automated methods/means for extracting and processing genetic motifs. It would further have been obvious to have designated the extraction range in the method and program of ATTWOOD and KAWANISHI, interactively on a display screen, as taught by MARR where the motivation would have been to input user-desired, as opposed to fixed, variables for sequence/motif matching, as taught by MARR. One skilled in the art would reasonably have expected success in interactively entering a designated motif range in the method of ATTWOOD and KAWANISHI because all of ATTWOOD, KAWANISHI, and MARR teach computer-implemented methods of comparing sequences, and MARR teaches variables for comparing sequences may be successfully entered (i.e. interactively) by a user in such a method.

In response to the argument that the database from which the motif sequence information is retrieved is not the same as the one to which it is added in ATTWOOD's method, it is noted that the claimed method and program recite retrieving a sequence from a gene arrangement information database, which is NOT limited to be the same as the input gene information arrangement. ATTWOOD teaches using a motif database (input gene information arrangement) to retrieve sequences from a larger database, then adds the retrieved information to the motif database. As ATTWOOD teaches steps corresponding to those claimed, the

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examiner maintains that ATTWOOD in combination with KAWANISHI and MARR make obvious the claimed method and program.

### **Conclusion**

Claims 2-9 are rejected; the abstract is again objected to.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marjorie A. Moran whose telephone number is (703) 305-2363. The examiner can normally be reached on Monday to Friday, 7:30 am to 4 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on (703) 308-4028. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 872-9306 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3524.

*Marjorie A. Moran*  
MARJORIE MORAN  
PATENT EXAMINER

mam  
June 20, 2003